

# GSP Low Profile Sized 105°C Series

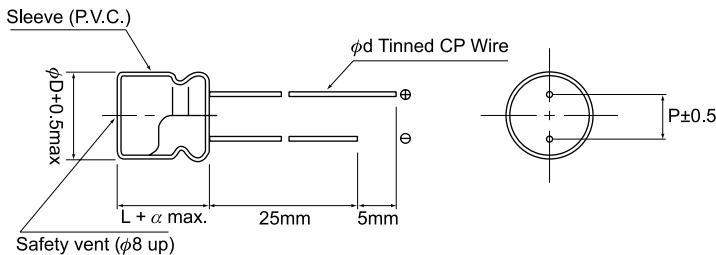
- Low profile designed and temperature range up to 105°C.
- Life guaranteed 1,000 hours/105°C.



• Specifications

| Item   | Performance Characteristics  |   |      |      |      |      |      |      |      |
|--|--|---|------|------|------|------|------|------|------|
| Operating Temperature range  | -40 + 105°C  |   |      |      |      |      |      |      |      |
| Rated Voltage  | 6.3V ~ 100V  |   |      |      |      |      |      |      |      |
| Capacitance Range  | 0.1 ~ 10,000 µF  |   |      |      |      |      |      |      |      |
| Capacitance Tolerance  | ±20% (120Hz, 20°C)   |   |      |      |      |      |      |      |      |
| Leakage Current  | I ≤ 0.01CV or 3 µA, whichever is greater after 2 minutes application of rated voltage.                               |   |      |      |      |      |      |      |      |
| Dissipation Factor (120Hz, 20°C)   | Rated voltage (V)  | 6.3                                     | 10   | 16   | 25   | 35   | 50   | 63   | 100  |
|  | Tan δ (max.)   | 0.28                                    | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 |
| For capacitance of more than 1,000µF, add 0.02 for every increase of 1,000µF |  |   |      |      |      |      |      |      |      |
| Temperature Characteristics (120Hz)  | Impedance Ratio / Stability at Low Temperature   |   |      |      |      |      |      |      |      |
|  | Rated voltage (V)  | 6.3                                     | 10   | 16   | 25   | 35   | 50   | 63   | 100  |
|  | Z (-25°C) / Z (20°C)   | 5                                       | 4    | 3    | 2    | 2    | 2    | 2    | 2    |
| Z (-40°C) / Z (20°C)   |  |   |      |      |      |      |      |      |      |
| 12 10 8 5 4 3 3 3  |  |   |      |      |      |      |      |      |      |
| Load Life  | After 1,000 hours application of WV at 105°C, capacitor shall meet the characteristics requirements mentioned below. |   |      |      |      |      |      |      |      |
|  | Capacitance change   | Within ±20% of initial value            |      |      |      |      |      |      |      |
|  | Tan δ  | 200% or less of initial specified value |      |      |      |      |      |      |      |
|  | Leakage current  | Initial specified value or less         |      |      |      |      |      |      |      |
| Shelf Life   | At 105°C, no voltage applied for 1,000 hours, the capacitor shall meet the limits as in load life.                   |   |      |      |      |      |      |      |      |

• Dimension (mm)



|    |     |     |     |     |    |     |    |      |
|----|-----|-----|-----|-----|----|-----|----|------|
| Dφ | 5   | 6.3 | 8   | 10  | 13 | 16  | 18 | 20   |
| P  | 2.0 | 2.5 | 3.5 | 5.0 |    | 7.5 |    | 10.0 |
| φd | 0.5 |     | 0.6 |     |    | 0.8 |    | 1.0  |
| α  | 1.5 |     |     |     |    |     |    | 2.0  |

• Standard Products Table

| Cap (µF) | WV(SV)  | Dφ x L (mm) |         |         |         |         |         |         |           |         |         |         |         |         |                  |          |  |
|----------|---------|-------------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|---------|---------|---------|------------------|----------|--|
|          |         | 6.3 (10)    | 10 (13) | 16 (20) | 25 (32) | 35 (44) | 50 (63) | 63 (75) | 100 (125) |         |         |         |         |         |                  |          |  |
| 0.1~0.47 |         |             |         |         |         |         |         |         |           | 5 x 9   |         |         |         |         |                  | 5 x 9    |  |
| 1        |         |             |         |         |         |         |         |         |           | 5 x 9   | 12      |         |         |         |                  | 5 x 9 15 |  |
| 2.2      |         |             |         |         |         |         |         |         |           | 5 x 9   | 18      |         |         |         |                  | 5 x 9 21 |  |
| 3.3      |         |             |         |         |         |         |         |         |           | 5 x 9   | 25      |         |         |         |                  | 5 x 9 29 |  |
| 4.7      |         |             |         |         |         |         |         |         |           | 5 x 9   | 30      |         |         |         |                  | 5 x 9 32 |  |
| 10       |         |             |         |         |         |         |         |         |           | 5 x 9   | 46      | 5 x 9   | 50      | 6.3 x 9 | 55               |          |  |
| 22       |         |             |         |         |         |         |         |         |           | 5 x 9   | 65      | 6.3 x 9 | 80      | 8 x 9   | 95               |          |  |
| 33       |         |             |         |         |         |         |         | 5 x 9   | 75        | 6.3 x 9 | 85      | 6.3 x 9 | 95      | 10 x 9  | 120              |          |  |
| 47       |         |             |         |         |         |         | 5 x 9   | 80      | 6.3 x 9   | 95      | 6.3 x 9 | 100     | 8 x 9   | 125     | 10 x 12 165      |          |  |
| 100      |         |             | 5 x 9   | 95      | 6.3 x 9 | 115     | 6.3 x 9 | 130     | 8 x 9     | 155     | 10 x 9  | 170     | 10 x 12 | 220     | 13 x 15 260      |          |  |
| 220      | 6.3 x 9 | 145         | 6.3 x 9 | 155     | 8 x 9   | 205     | 10 x 9  | 220     | 10 x 9    | 235     | 10 x 12 | 290     | 13 x 13 | 330     | 16 x 15 440      |          |  |
| 330      | 6.3 x 9 | 180         | 8 x 9   | 210     | 10 x 9  | 240     | 10 x 9  | 270     | 10 x 12   | 340     | 13 x 13 | 370     | 13 x 15 | 430     | 18 x 20 590      |          |  |
| 470      | 8 x 9   | 235         | 8 x 9   | 275     | 10 x 9  | 290     | 10 x 12 | 370     | 13 x 13   | 420     | 16 x 15 | 540     | 18 x 15 | 600     | 18 x 25 770      |          |  |
| 1000     | 10 x 9  | 370         | 10 x 12 | 450     | 13 x 13 | 520     | 13 x 15 | 590     | 16 x 15   | 720     | 18 x 20 | 830     | 18 x 25 | 1000    |                  |          |  |
| 2200     | 13 x 15 | 635         | 13 x 15 | 690     | 16 x 15 | 830     | 18 x 15 | 970     | 18 x 20   | 1110    | 20 x 25 | 1250    |         |         |                  |          |  |
| 3300     | 16 x 15 | 860         | 16 x 15 | 940     | 18 x 15 | 1050    | 18 x 20 | 1220    | 20 x 25   | 1430    |         |         |         |         |                  |          |  |
| 4700     | 16 x 15 | 1010        | 18 x 15 | 1120    | 18 x 20 | 1260    | 18 x 25 | 1470    |           |         |         |         |         |         |                  |          |  |
| 6800     | 18 x 15 | 1200        | 18 x 20 | 1330    | 18 x 25 | 1560    |         |         |           |         |         |         |         |         |                  |          |  |
| 10000    | 18 x 20 | 1450        | 18 x 25 | 1700    |         |         |         |         |           |         |         |         |         |         | Case Size Ripple |          |  |

Ripple current (mA) at 105°C 120Hz